

NORTH CAROLINA ALIGNMENT FOR NIH SUPPLEMENT: CHEMICALS, THE ENVIRONMENT, AND YOU

CHEMICALS, THE ENVIRONMENT, AND YOU		
North Carolina Standard Course of Study – Science: Grades 6, 7, 8		
Lesson	Competency Goal	Description
2, 4	1.01	Identify and create questions and hypotheses that can be answered through scientific investigations.
2, 4	1.02	Develop appropriate experimental procedures for: given questions and student generated questions.
1, 2, 3, 4	1.03	Apply safety procedures in the laboratory and in field studies: recognize potential hazards, manipulate materials and equipment, and conduct appropriate procedures.
2, 4, 6	1.04	Analyze variables in scientific investigations: identify dependent and independent, use of a control, manipulate, describe relationships between, and define operationally.
1, 3, 4, 5, 6	1.05	Analyze evidence to: explain observations, make inferences and predictions, and develop the relationship between evidence and explanation.
2, 3, 4	1.06	Use mathematics to gather, organize, and present quantitative data resulting from scientific investigations: measurement, analysis of data, graphing, and prediction models.
All lessons	1.08	Prepare models and/or computer simulations to: test hypotheses and evaluate how data fit.
2, 3, 4, 5, 6	1.09	Use oral and written language to: communicate findings and defend conclusions of scientific investigations.
5, 6	1.10	Analyze and evaluate information from a scientifically literate viewpoint by reading, hearing, and/or viewing: scientific text, articles, and events in the popular press.
5	3.04	Describe how terrestrial and aquatic food webs are interconnected. (8)
5	3.08	Recognize that the good health of environments and organisms requires: monitoring of the hydrosphere, water quality standards, methods of water treatment, maintaining safe water quality, and stewardship. (8)
1	4.01	Understand that both naturally occurring and synthetic substances are chemicals. (8)
1	4.02	Evaluate evidence that elements combine in a multitude of ways to produce compounds that account for all living and nonliving substances. (8)
4, 5, 6	4.04	Evaluate how systems in the human body help regulate the internal environment. (7)
4, 5, 6	4.05	Analyze how an imbalance in homeostasis may result from a disruption in any human system. (7)
4, 5, 6	4.07	Explain the effects of environmental influences on human embryo development and human health including:

Source: [http://www.ncpublicschools.org/curriculum/ncStandard Course of Study](http://www.ncpublicschools.org/curriculum/ncStandard%20Course%20of%20Study)

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		smoking, alcohol, drugs, and diet. (7)
4, 5, 6	4.08	Explain how understanding human body systems can help make informed decisions regarding health. (7)
4,5,6	4.08	Identify evidence that some chemicals may contribute to human health conditions including: cancer, autoimmune disease, birth defects, heart disease, diabetes, learning and behavioral disorders, kidney disease, and asthma. (8)
All lessons	4.09	Describe factors that determine the effects a chemical has on a living organism including: exposure, potency, dose and the resultant concentration of chemical in the organism, individual susceptibility, and possible means to eliminate or reduce effects. (8)
All lessons	4.10	Describe risks and benefits of chemicals including: medicines, food preservatives, crop yield, and sanitation. (8)
4, 5, 6	5.06	Evaluate evidence that human characteristics are a product of inheritance, environmental factors, and lifestyle choices. (7)
North Carolina Standard Course of Study – Mathematics: Grades 6, 7, 8		
Lesson	Competency Goal	Description
2, 3	1.01	Develop and use ratios, proportions, and percents to solve problems. (7)
2, 3	1.02	Develop meaning for percents: connect the model, number word, and number using a variety of representations and make estimates in appropriate situations. (6)
2, 3, 4	1.02	Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers: analyze computational strategies, describe the effect of operations on size, estimate the results of computations, and judge the reasonableness of solutions. (7)
2, 3, 4	1.02	Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil. (8)
2, 3, 4	1.03	Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil. (7)
2, 3, 4	1.04	Develop fluency in addition, subtraction, multiplication, and division of non-negative rational numbers: analyze computational strategies, describe the effect of operations on size, estimate the results of computations, and judge the reasonableness of solutions. (6)
2, 3, 4	1.07	Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil. (6)

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2, 3, 4	4.01	Collect, organize, analyze, and display data to solve problems. (7 & 8)
3, 4	4.05	Solve problems involving two or more sets of data using appropriate statistical measures. (7)
2, 3, 4	4.06	Design and conduct experiments or surveys to solve problems; report and analyze results. (6)
2, 3	5.04	Use graphs, tables, and symbols to model and solve problems involving rates of change and ratios. (6)

North Carolina Standard Course of Study – English Language Arts: Grades 6, 7, 8

Lesson	Competency Goal	Description
All lessons	1.03	Interact appropriately in group settings by: listening attentively, showing empathy, contributing relevant comments connecting personal experiences to content, monitoring own understanding of the discussion and seeking clarification as needed (6), responding appropriately to comments and questions, offering personal opinions confidently without dominating, giving appropriate reasons that support opinions, soliciting and respecting another person's opinion (7), shares personal reactions to questions raised, gives reasons and cites examples from text in support of expressed opinions, and clarifies, illustrates, or expands on a response when asked to do so, and asks classmates for similar expansion. (8)
All lessons	1.04	Reflect on learning experiences by: describing personal learning growth and changes in perspective, identifying changes in self throughout the learning process, and interpreting how personal circumstances and background shape interaction with text.
3, 4, 5, 6	3.02	Explore and analyze the problem-solution process by: studying problems and solutions within various texts and situations, utilizing the problem-solution process within various contexts/situations, constructing essays/presentations that respond to a given problem by proposing a solution that includes relevant details, and recognizing and/or creating an organizing structure appropriate to purpose, audience, and context. (7 & 8)
All lessons	3.03	Evaluate and create arguments that persuade by: understanding the importance of the engagement of audience by establishing a context, creating a persona, and otherwise developing interest, noting and/or developing a controlling idea that makes a clear and knowledgeable judgment, arranging details, reasons, and examples effectively and persuasively, anticipating and addressing reader/listener concerns and counterarguments, and recognizing and/or creating an organizing structure appropriate to purpose, audience, and context. (7 & 8)

North Carolina Standard Course of Study – Healthful Living: Grades 6, 7, 8

Lesson	Competency Goal	Description
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All lessons	1.01	Use a structured thinking process to make decisions and solve problems. (6)
5	2.03	Evaluate the accuracy and significance of media reports on health and medical research. (8)
1, 5, 6	2.04	Analyze how the interaction of individual behaviors, the environment, and other factors cause or prevent injuries. (7)
5	2.06	Appraise personal health status. (8)
5	2.07	Predict the potential personal health consequences of global environmental problems. (8)
1, 5	2.08	Evaluate how personal behaviors contribute to environmental improvement and destruction. (8)
4	5.04	Differentiate proper use from abuse of over the counter medications and predict the consequences of abuse. (7)
All lessons	10.03	Utilize time effectively to complete assigned tasks. (6)
All lessons	10.04	Work cooperatively and productively in a group to accomplish a set goal in both cooperative and competitive activities. (6 & 8)

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